

wherein X is selected from the group consisting of an amino acid, an amino acid analog, a peptidomimetic and a non-amide isostere, Z is selected from the group consisting of a synthetic amino acid and a biosynthetic amino acid, R is selected from the group consisting of oxygen, nitrogen and carbon, n is 0 to 10 and y is 1 to 10. The present invention also provides a cyclic peptide comprising the amino acid sequence of $\text{NH}_2\text{-X}_{(n)}\text{-Z-X}_{(y)}\text{-COOH}$ and a cyclic bond between the Z residue and COOH other than a thioester bond, wherein X is selected from the group consisting of an amino acid, an amino acid analog, a peptidomimetic and a non-amide isostere, Z is selected from the group consisting of a synthetic amino acid and a biosynthetic amino acid, n is 0 to 10 and y is 1 to 10. Methods of preparation including a cyclization protocol, and methods of use of the cyclic peptides of the invention are also disclosed.